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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,696	10/31/2003	Makoto Saito	2018-801	9831

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EXAMINER	
NGUYEN, TU MINH	
ART UNIT	**PAPER NUMBER**
3748	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/697,696	SAITO ET AL.	
	Examiner	Art Unit	
	Tu M. Nguyen	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-10,15 and 16* is/are pending in the application.

4a) Of the above claim(s) *3,5 and 7-10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6,15 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. An Applicant's Request for Continued Examination (RCE) and an Applicant's Amendment filed on September 14, 2005 have been entered. Claims 11-14 have been canceled; claim 1 has been amended; and claim 16 has been added. Overall, claims 1-3, 5-10, 15, and 16 are pending in this application.

Based on a previous Applicant's Response to an Election/Restriction Requirement mailed on February 3, 2005, claims 1, 2, 6, 15, and 16 will be examined in their full merit. Claims 3, 5, and 7-10 are withdrawn from further consideration by the examiner as being drawn to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 6, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuwamoto et al. (U.S. Patent 5,853,459).

Re claim 1, as shown in Figures 1-3, Kuwamoto et al. disclose an exhaust gas cleaning system for an internal combustion engine (6), the exhaust gas cleaning system comprising a particulate filter (15a), which is fixedly held by a holding member (not numbered but clearly shown in Figure 3) in a metallic case (14a) disposed in an exhaust pipe (10a) of the engine and collects particulate matters included in exhaust gas, wherein

- the particulate filter is formed of a monolithic structural body having a multiplicity of cells (3) provided by porous walls (2) in parallel with flow of the exhaust gas,

- the particulate filter has a particulate matter collecting area having wall flow structure, in which the cells are blocked alternately with filler (4) on an exhaust gas inlet side or an exhaust gas outlet side of the particulate filter (see Figure 1), and a peripheral heat-retaining layer (5), which is formed by blocking the cells in a peripheral area extending inward from a peripheral surface of the monolithic structural body by a predetermined width so that the peripheral heat-retaining layer continuously surrounds a periphery of the particulate matter collecting area, and

- the peripheral heat-retaining layer is formed by blocking the entire cells in the peripheral area only on the exhaust gas inlet side of the monolithic structural body (see Figure 1 where the peripheral heat-retaining layer (5) is only on the inlet side of the filter), wherein the entire cells in the peripheral area are not blocked on the exhaust gas outlet side of the monolithic structural body.

Re claims 6 and 15, in the system of Kuwamoto et al., the peripheral heat-retaining layer is formed by blocking the cells, which are completely or partially included in the peripheral area (see Figure 2).

4. Claims 1, 6, and 15 are further rejected under 35 U.S.C. 102(e) as being anticipated by Badeau et al. (U.S. Patent 6,544,310).

Re claim 1, as shown in Figures 1 and 11, Badeau et al. disclose an exhaust gas cleaning system for an internal combustion engine (22), the exhaust gas cleaning system comprising a particulate filter (20), which is fixedly held by a holding member (not numbered but inherently must have) in a metallic case (102) disposed in an exhaust pipe of the engine and collects particulate matters included in exhaust gas, wherein

- the particulate filter is formed of a monolithic structural body having a multiplicity of cells (60) provided by porous walls (38) in parallel with flow of the exhaust gas,

- the particulate filter has a particulate matter collecting area having wall flow structure, in which the cells are blocked alternately with filler (92) on an exhaust gas inlet side or an exhaust gas outlet side of the particulate filter (see Figure 11), and a peripheral heat-retaining layer (110), which is formed by blocking the cells in a peripheral area extending inward from a peripheral surface of the monolithic structural body by a predetermined width so that the peripheral heat-retaining layer continuously surrounds a periphery of the particulate matter collecting area, and

- the peripheral heat-retaining layer is formed by blocking the entire cells in the peripheral area only on the exhaust gas inlet side of the monolithic structural body (see Figure 11 where the peripheral heat-retaining layer (110) is only on the inlet side of the filter), wherein the entire cells in the peripheral area are not blocked on the exhaust gas outlet side of the monolithic structural body.

Re claims 6 and 15, in the system of Badeau et al., the peripheral heat-retaining layer is formed by blocking the cells, which are completely or partially included in the peripheral area (see Figure 11).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwamoto et al. or Badeau et al. as applied to claim 1 above, in view of legal precedent.

Re claim 2, in the system of Kuwamoto et al. or Badeau et al., the monolithic structural body has a peripheral skin portion ((1) for Kuwamoto et al., (28) for Badeau et al.) providing a peripheral wall of the monolithic structural body, the peripheral surface of the monolithic structural body serves as a peripheral surface of the peripheral skin portion.

Kuwamoto et al. or Badeau et al., however, fail to disclose that the peripheral skin portion has thickness in a range from 0.2 to 1.0 mm.

Kuwamoto et al. or Badeau et al. disclose the claimed invention except for specifying an optimum range of peripheral skin thickness from 0.2 to 1.0 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a specific optimum range of peripheral skin thickness, since it has been held that where the general

conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Re claim 16, the system of Kuwamoto et al. or Badeau et al. discloses the invention as cited above, however, fails to disclose that the predetermined width of the peripheral heat-retaining layer ranges from 5 to 20 mm.

Kuwamoto et al. or Badeau et al. disclose the claimed invention except for specifying an optimum range of the peripheral heat-retaining layer width from 5 to 20 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a specific optimum range of the peripheral heat-retaining layer width, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of two patents: Frost et al. (U.S. Patent 4,419,108) and Ketcham et al. (U.S. Patent 6,673,414) further disclose a state of the art.

Communication

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tu M. Nguyen

TMN

October 16, 2005

Tu M. Nguyen

Primary Examiner

Art Unit 3748